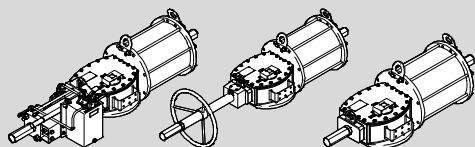


Quarter-turn actuator

DFPD-HD

 II 2GD c IIB TX X



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Special documentation EX

8066279
1612
[8066281]

Original: de



Quarter-turn actuator DFPD-HD English

 All available documents for the product → www.festo.com/pk

→ Note

Technical data for the product can have different values in other documents. When operation is in a potentially explosive atmosphere, the technical data in this document always has priority.

1 Function

The DFPD-HD is a double or single-acting quarter turn actuator. The piston is moved by pressurizing (and exhausting) the pneumatic cylinder. The linear motion of the piston is transformed via a Scotch yoke system into a swivel motion of the transmission shaft. The connected process valve records the moment of reaction of the quarter turn actuator.

2 Application

- The DFPD-HD quarter turn actuator is intended to activate process valves, such as ball valves and butterfly shut-off valves with a rotation angle from 0° (valve closed) to 90°. The quarter turn actuator is suitable for controlling media-flow process valves in fluid engineering systems.
- Operate the device with compressed air of the following quality class in accordance with ISO 8573-1:2010: [7:4:4].
Note on the operating medium: Operation with lubricated medium not possible.
- The device can be used under the stated operating conditions in zones 1 and 2, potentially explosive gas atmospheres, and in zones 21 and 22, potentially explosive dust atmospheres.

→ Note

Identification TX: Special conditions

- The maximum surface temperature is not dependent on the device itself, but on the temperature of the surrounding environment and the compressed air.

Identification X: Special conditions

- Danger of electrostatic discharge.

- Use the device in its original status, without any unauthorised modifications. Any manipulation performed on the device by anyone other than the manufacturer will void the certification.
- The following work should only be performed outside potentially explosive areas: commissioning, maintenance, mounting.

3 Commissioning

- Observe the specifications on the product labelling.
- Comply with all applicable national and international regulations.

→ Note

Escaping exhaust air can swirl up dust and create a potentially explosive dust atmosphere.



Warning

Corrosive gases and dust particles inside components can result in changes to material and material damage.

Explosive gas atmospheres or dust should not penetrate into the spring area of single-acting actuators.

- Install an exhaust return using a 3/2-way valve that is suitable for zones 1, 2, 21 and 22 or
- Ensure that air in the spring area is only extracted via hose assemblies at connection B outside potentially explosive areas.



Warning

The discharge of electrostatically charged parts can lead to ignitable sparks.

- Prevent electrostatic charging of the housing through the use of appropriate installation and cleaning measures.
- Include the housing in the equipotential bonding of the system.
- The shaft is electrically insulated from the actuator. Include the shaft separately in the equipotential bonding of the system.
- Ensure that the electrical resistance between the process valve and actuator is a maximum of 10 Ω.



Note

Strong charge-generating processes can charge non-conductive layers and coatings on metal surfaces.

4 Operation

- Observe the operating conditions.
- Observe the information in the general operating instructions.
- Observe the permitted limit values → Technical data.
- Draw in operating medium outside potentially explosive areas.

5 Maintenance and care

When used as intended, the device is maintenance-free.

Festo recommends the following periodic inspections:

Interval	Inspection
Annually	Correct function of the quarter turn actuator by repeatedly opening and closing the valve (rotation angle = 90°)
Every six months	Visual inspection (during operation)
Quarterly	Correct function of the quarter turn actuator during operation

6 Technical data

Operating conditions		
Operating medium		Compressed air in accordance with ISO8573-1:2010 [7:4:4] ¹⁾
Note on the operating medium		Lubricated operation not possible
Ambient temperature	[°C]	-20 ... +80
Rotation angle	[°]	0...90
Mounting position		Parallel to line axis (DFPD-HD-...-HW horizontal only)
Pneumatic port		G½, G1
Standard connection to the process valve		ISO 5211
CE marking		according to EU Explosion Protection Directive (ATEX) according to EC Machinery Directive (Declaration of conformity) → www.festo.com/sp
Operating conditions		
Operating pressure ²⁾	[bar]	3...8.5
Nominal operating pressure	[bar]	5.0
End position adjustment range 0°	[°]	± 5
End position adjustment range 90°	[°]	± 5
Degree of protection		IP66M, IP67M

1) Note: Pressure dew point at least 10 °C below the outside temperature.

2) Dependent on the spring force, see product labelling

Fig. 1